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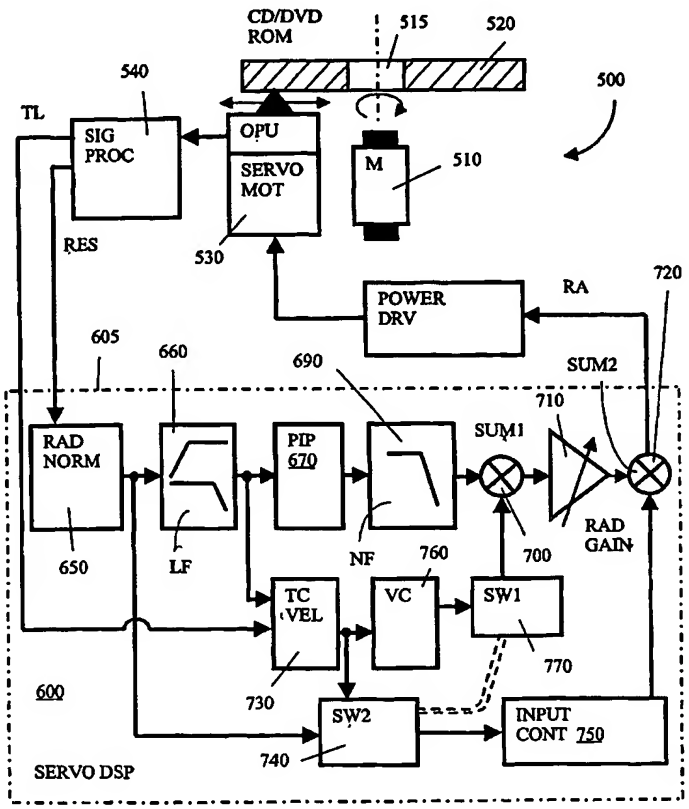
(54) Title: SERVO SYSTEM



(57) Abstract: There is provided a servo system for controlling position of a sensor assembly (30) in a data readout and/or writing device (10, 500). The device (10, 500) includes: (a) two actuators (28, 36) for spatially actuating a structural assembly (22) and its associated sensor assembly (30, 530), the system further comprising: (b) a servo control unit (34, 600) in communication with the two actuators (28, 36) for controlling spatial movement of the structural assembly (22) and the sensor assembly (30, 530). The controlling means (34) is operable: (c) to apply substantially velocity feedback control to the actuators (28, 36) when the sensor assembly (30, 530) is substantially remote from a desired target position; and (d) to apply substantially position feedback control to the actuators (28, 36) when the sensor assembly (30, 530) is substantially spatially proximate to said target position. The servo control unit (34, 600) further includes pole-compensating filtering means (126) for at least partially compensating response poles of the structural assembly (22) and its sensor assembly (30, 530)) so as to result during operation of the system in smoother switching between said substantially velocity feedback control and said position feedback control for enhancing at least one of temporal and spatially responses of the system when controlled by the servo control units (34, 600).

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